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NOTES ON TYPES (HYMENOPTERA : CYNIPIDAE).

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During the two decades or more that Professor J. J. Kieffer worked on the Cynipidae it appears that he never visited the leading entomological museums of Europe to study types but depended mainly on the literature for his understanding of the existing genera. This dependence on the literature alone led to a misunderstanding of some of the Ashmead genera. It led him into error also in the case of some of the genera established by Europeans so that in creating some 55 new genera himself he has made some synonyms especially in cases where the older authors had placed their genera in the wrong subfamilies. No student of the Cynipidae hitherto has attempted to locate and study the types of the genotype species. Recently the writer visited three of the European museums with this as a definite object and it seems desirable to place on record some of the information and conclusions which resulted from this incomplete preliminary study.

PARAMBLYNOTUS Cameron.

Allocynips Kieffer, 1914 Phil. Jour. Sci. D 9 : 185. Synonymy new.

Cameron placed his genus *Paramblynotus* in the Figitinae but the holotype female of the genotype species, *punctulatus*, in the British Museum has not the characteristic segmentation of the abdomen of a Figitid, tergite five and not tergite three being the largest and it is preceded by three (instead of one) shorter, non-liguliform tergites. The genus should be transferred to the Liopterinae. *Allocynips borneensis* Weld is a synonym of it and should be known as *Paramblynotus punctulatus* Cameron. (Synonymy new.) *Allocynips ruficeps* Kieffer, the genotype of *Allocynips*, is a synonym of *Paramblynotus ruficollis* Cameron. (Synonymy new.) All the other described species of *Allocynips* should be transferred to Cameron's genus and known as: *Paramblynotus clarus* (Weld); *P. dyak* (Weld); *P. malayensis* (Weld); *P. isosceles* (Weld); and *P. flaviceps* (Kieffer). (Combinations new.) The male which Cameron received later and subsequently described as the male of his *punctulatus* seems to me to be erroneously associated and to be an undescribed species.

PSEUDIBALIA Kieffer.

One of the characters given for this genus is that the metatarsus of the hind leg is prolonged "au côté interne" into a blunt spur reaching the end of the second segment. The holotype female of the genotype species, *fasciatiennis*, in the British Museum has this spur on the *outer* side as it is in *Ibalia* and not on the inner as described by Kieffer. The petiole is described as 3-4 times as long as broad but measured by a micrometer it is barely three times as long as broad when viewed from above. The relative lengths of the tergites along the dorsal curvature are as (petiole) 17 (width $5\frac{3}{4}$) : 6 : 9 : 23 : 9 : 7 : 9. Height of abdomen 33 and width 23. As both *Pseudibalia* Kieffer and *Paribalia* Weld have the tarsal spur on the outer side the latter genus may be distinguished by having a short petiole (not longer than broad) and having the fifth tergite (instead of the fourth) largest.

NERALSIA Cameron.

Xyalosema D T & K. 1910 Das Tierreich Lief. 24 : 94. Synonymy new.

Neralsia was based on *N. rufipes* from Guatemala and was described (1883, Biol. Cent.-Amer. Hym. 1:74, Pl. 4, fig. 9) as having a closed radial cell (although Cameron's figure shows it open) and thought to be intermediate between the Anacharitinæ and Figitinæ. Das Tierreich put it in the Aspicerinæ. The type in the British Museum is one of the Figitinæ. The abdomen is longer than head plus thorax, the second tergite striate at the base, not liguliform, shorter than the third. The wing is normally pubescent and ciliate and the radial cell is open on the margin. The eyes are sparsely hairy and not bare as stated. *Solenaspis* Ashmead 1887, preoccupied by Osten Sacken in Diptera in 1881 and renamed by Dalla Torre and Kieffer in 1910, is congeneric with this and the name *Xyalosema* should become a synonym of *Neralsia* in the Figitinæ. *Solenaspis singularis* Ashmead is a *Xyalophora* (Comb. new). To the genus *Neralsia* should be transferred the following species:

Neralsia armata (Say) (Diplolepis) 1836 Boston Jour. Nat. Hist. 1 : 266. Comb. n.

Neralsia hyalinipennis (Ashmead) (Solenaspis) Genotype. 1887 Trans. Amer. Ent. Soc. 14: 155. Comb. n. = *dubiosa* Kieffer (Xyalosema) 1910 Boll. Laboro. Zool. Portici 4 : 338. Syn. n.

Neralsia ciliatinervis Kieffer (Xyalosema) 1910 Boll. Laboro. Zool. Portici 4 : 339. Comb. n.

Neralsia evanescens Kieffer (Xyalosema) 1907 Ent. Ztschr. Stuttgart 21 : 157. Comb. n.

ANACHAROIDES Cameron.

Coelonychia Kieffer, 1910 Wiss. Erg. Deutch. Zent.-Afr. Exp. 1907-8, 3 (2) : 19.
Synonymy new.

Cameron's genus was based on *Anacharoides striaticeps* (Rec. Albany Mus. 1: 160, 1904) from Cape Colony and placed in the Anacharitinae. The type is in the British Museum and it belongs in the Aspicerinae for the second tergite is liguliform, the wings bare and the veins very pale. The type of *Coelonychia spinosipes* in the Berlin museum is congeneric with this. Therefore Kieffer's *Coelonychia*, correctly placed in the Aspicerinae, becomes a synonym of *Anacharoides* Cameron.

BOTHROCHACIS Cameron.

Stirengoela Cameron, 1910 Entomologist 43 : 180. Synonymy new.
Ditrupaspis Kieffer, 1910 Wiss. Erg. Deutch. Zent.-Afr. Exp. 1907-8, 3 (2) : 18,
Synonymy new.

Cameron's *Bothrochacis* was founded on two males of *Bothrochacis erythropoda* from Cape Colony. Six years later he founded the genus *Stirengoela* on a male of *Stirengoela striaticollis*, also from Cape Colony. The types of both are in the British Museum and they seem to me to be not only congeneric but the same species (Synonymy new.) The type of *Ditrupaspis semirufa* Kieffer from N. Nyassa preserved in the Berlin museum is congeneric with the above. Hence I conclude that both *Stirengoela* and *Ditrupaspis* should become synonyms of *Bothrochacis* Cameron.

ANDRICUS Hartig.

Oncaspis Dettmer, 1925 Natuurhist. Maandb. Maastricht 14 : 123.
Euschmitzia Dettmer, 1925 Natuurhist. Maandb. Maastricht 14 : 122. Synonymy new.

Type material of *Oncaspis filigranata*, the genotype species, seen in Berlin in 1929, runs to *Andricus* and Professor Dettmer wrote me in April, 1927, that he had discovered that it is "almost certainly the long sought for sexual generation of *Andricus solitarius* (Fonsc.) and not a new genus." In 1928, he published a description of the gall and his evidence that it is the sexual generation of *Andricus solitarius* (Fonsc.) in *Marcellia* 24 : 142. His *Euschmitzia rara*, the genotype, was thought to be a guest-fly in a *Rhodites* gall but as his description was not that of an inquiline his attention was called to the possibility of error and under date of May 1, 1929, he writes me that this species is the sexual generation of *Andricus nudus* Adl. and requests that I

publish it. Thus both of his new genera become synonyms of *Andricus*.

CALLIRHYTIS Förster.

In the original description of the genotype, *Callirhytis hartigi* Förster, it is not stated whether or not the tarsal claws are toothed. Mayr in 1902 considered them as simple and Ashmead in his key to genera in 1903 reversed Mayr's interpretation by putting species with simple claws in *Andricus* (whose genotype has toothed claws) and those with the claws toothed in *Callirhytis*, thus causing a confusion which has persisted to the present day. Das Tierreich has followed Mayr's interpretation but its authors seem to be unacquainted with the genotype species. The museum in Vienna has two specimens labelled "Aachen, *Call. Hartigi*, Förster's type. Collect. G. Mayr." They are males. Without having seen females I venture the guess that this is the sexual generation of a species whose agamic generation will be found to be in "stone galls" inside of acorns. From the above specimens the following notes are made to supplement Förster's original description:

Callirhytis hartigi Förster.

Male.—Amber-colored. Head coriaceous, from above transverse, occiput concave, wider than thorax, cheeks not broadened behind eyes. Malar space .17 eye without groove. Flagellum filiform with cylindrical segments, the first curved and enlarged distally and not quite as long as the second, the last only slightly longer than the penultimate. Mesoscutum with low sharp transverse ridges well separated from each other on a uniformly smooth surface. The parapsidal grooves not very distinct even posteriorly and obsolete in front. Scutellum with transverse groove at base and a suggestion of small narrow pits which open out behind on to disk which is transversely rugose. Mesopleura smooth below, coriaceous across middle, the first and second coxae far separated. Carinae on propodeum straight and parallel. Claws are simple. Wing seems to be normally pubescent and ciliate. First abscissa of radius arcuate, second straight. Abdomen shorter than thorax, longer than high, tergites along dorsal curvature as 30 : 9 : 1 : 0 : 6.

Callirhytis azteeca (Cameron). Comb. new.

Andricus (*Aphilothrix*) *aztecus* Cameron, 1897 Ann. & Mag. Nat. Hist. (6) 19 : 261.

The holotype female in the British Museum from Sonora, Mexico, proves to be a *Callirhytis* with hyaline, non-ciliate wings and running to couplet 23 in Section B of my key in Proc. U. S. N. M. 61, Art. 19 : 11. It is evidently from a "stone gall" in an acorn.

Callirhytis defecta Kieffer.

This American species whose types are in Berlin is also one of the "stone gall" in acorn group and runs to couplet 21 on p. 11 in the above mentioned key.

Amphibolips arcuata (Kieffer). Comb. new.

Callirhytis arcuata Kieffer 1910 Boll. Laboro. Zool. Portici. 4 : 341.

Of the three specimens in the Berlin Museum all collected by Klug in Georgia and all labelled as types, and supposedly of Kieffer's species above, only one agrees with the description. It is the one numbered "8070" and is here transferred to the genus *Amphibolips*. The number 8037 is a *Callirhytis* and 8022 is a *Disholcaspis*.

HOLOCYNIPS Kieffer.

This genus was founded by Kieffer on a single captured specimen from Georgia described as *Holocynips emarginata* and the genus has hitherto remained unrecognized in our fauna by American students. A study of the holotype in the Berlin Museum shows that the first three species in the writer's key to the root gall forming species of *Callirhytis* in Proc. U. S. N. M. 59 : 213 (1921) are congeneric and should be transferred to this genus. Moreover, *corallosa* Weld (1921) proves to be the same species as *emarginata* Kieffer (1910). As this had been suspected, a paratype of *corallosa* had been taken along to Berlin and the above conclusion is the result of a direct comparison. But *corallosa* had previously been shown to be a synonym of *Amphibolips badius* Bassett (1922, Proc. U. S. N. M. 61, Art. 18 : 17). Thus recognizing the validity of Kieffer's genus the names of its three species are:

Holocynips badia (Bassett). Comb. new.

Amphibolips badius Bassett (= *Callirhytis corallosa* Weld). Synonymy published.
Holocynips emarginata Kieffer, 1910 Boll. Laboro. Zool. Portici 4 : 114. Synonymy new.

A further note on the biology of the species is here added. An adult was taken ovipositing in the buds at the summit of a thrifty shoot of *Quercus alba* L. at East Falls Church, Va., on April 13, 1924. The alternating generation is unknown. One was captured on the roof of the Education Building 125 feet above the sidewalk and a mile from any oak trees in Albany, N. Y., on April 15, 1927.

Holocynips hartmani (Weld). Comb. new

Holocynips maxima (Weld). Comb. new.

A fly of this species was taken ovipositing in the buds of *Quercus alba* L. at Washington, D. C., on March 27, 1921; another was taken April 15, 1924, and two more on April 20. At East Falls Church, Va., one was taken ovipositing in buds of white oak on April 18, 1927, and others on April 6, 13, 19, 20, 1928. The alternating generation is unknown. One was captured on the roof of the Education Building in Albany, N. Y., on April 20, 1927.

LIODORA Förster.

Förster's types of *Liodora sulcata*, the genotype species, were studied, two specimens in Berlin and four in Vienna. They do not seem to me to be congeneric with the sexual generation of *Diplolepis folii* (L.) and it is my present opinion that Das Tierreich has been in error in including *Liodora* in *Diplolepis* and that it would be better to maintain it as separate genus. Through the kindness of Dr. F. Maidl the U. S. National Museum has been able to acquire one of the Vienna specimens in exchange and from this the following notes have been made to supplement Förster's original description.

Liodora sulcata Förster.

Female.—Head from above transverse, as broad as thorax, not broadened behind eyes, occiput slightly concave. Malar space .4 eye without groove. Antennae 14-segmented, relative lengths as (scape) 15 (6) : 8 (6) : 15 (5) : 13 : 11 : 10 : 9 : 9 : 9 : 8 : 8 : 8 : 8 (6) : 11. Pronotum "narrow," pubescent on sides. Mesoscutum as broad as long, smooth and shining with a few scattered hairs anteriorly, parapsidal grooves deep, smooth, percurrent, separation at hind margin about three times the width of a groove. No median. Anterior and lateral lines scarcely visible. Scutellum rugose, pubescent, distinctly overhanging metanotum behind, with two deep, smooth, elliptical pits at base separated by a distinct septum. Mesopleura smooth and shining with a few scattered hairs below. Propodeum with two almost straight and parallel carinae enclosing a transverse smooth bare area with no median. Tarsal claws with a distinct tooth. Wing normally pubescent and ciliate, radial cell about four times as long as broad, first abscissa of radius arcuate and one-fifth as long as the second which is straight. Areolet small, reaching one-ninth and the cubitus about three-fourths way to basal. Abdomen sessile, the short rugose neck of propodeum not reaching as far back as the tip of the scutellum; length to height to width as 65 : 55 : 44. Lengths of tergites along dorsal curvature as 50 : 12 (rest hidden), the second with usual pubescent patches at base and hind margin in side view a straight line at angle of 45 degrees to longitudinal axis. Sheaths at same angle, the tips projecting slightly dorsally behind second tergite. Ven-

tral spine in side view directed almost horizontally backward, slender, four times as long as broad at base, a few hairs on ventral surface of hypopygium but scarcely any on spine. Using the width of the head as a base the length of mesonotum ratio is 1.3, length of antenna 2.27, length of wing 4.0. Length of body 2.1 mm.

PANTELIELLA Kieffer.

Through the courtesy of Dr. F. Maidl of the Vienna Museum the U. S. National Museum was given a portion of the type gall cluster of *Panteliella fedtschenkoi* (Rübsaamen), genotype species, on leaf of *Phlomis tuberosa* L. from "Bijou-Onlar, Krim." After relaxing the galls I was able to cut out two adults from which the following notes are made to supplement the original description.

Panteliella fedtschenkoi (Rübsaamen).

Female.—Brown, the head and abdomen lighter, legs yellowish. Head from above transverse, wider than thorax, occiput slightly concave; from in front broader than high, interocular area 1.5 times as broad as high, malar space .6 eye without groove. Antennae 14-segmented, relative lengths of segments (in balsam mount) as (scape) 21 (14) : 24 (14) : 24 (11) : 24 : 24 : 23 (15) : 21 : 21 : 20 : 20 (15) : 20 : 20 : 20 : 30 (13). Pronotum "broad" in the median line as in the *Aylax* group. Mesoscutum under magnification of 75 coriaceous, aciculate behind, without distinct parapsidal grooves (their position however and that of a median is faintly indicated in the sculpture). Scutellum finely rugose with two distinct smooth pits at base separated by a septum from which fine ridges spread out fanwise on to disk. Mesopleura aciculate. Tarsal claws in balsam mount simple (not "weakly toothed"). Wing normally pubescent, first abscissa of radius heavy, straight, about one-sixth length of second which is straight also. Abdomen higher than long, relative lengths of tergites along dorsal curvature as 30 : 8 : 4 : 3 : 2 : 6, second occupying .68 length of abdomen. Ventral spine in side view about twice as long as broad. Using the width of the head as a base the length of mesonotum ratio is 1.0, length of antenna 2.0, length of wing 3.1. Length of body 1.15 mm.

Synergus filicornis Cameron.

Synergus furnessana Weld, 1913, Insect. Insc. Menst. 1: 134, Pl. 4, figs. 8-13.

Synonymy new.

The Cameron holotype female from Guatemala in the British Museum has the mesopleura all black. Except on this one point the description of my *furnessana* from Mexico agreed with it. I recalled however that there was some variation in color in the type material of *furnessana* and on my return I found among the paratypes a female with black mesopleura. This was sent to London where through the kindness of Dr. James Waterston and Mr. R. B. Benson a direct comparison

was made with the Cameron type. "*Furnessana* is apparently the same as *flicornis*. Neither of us can see anything to distinguish them. The color is exactly similar." Hence I conclude that I have redescribed Cameron's species under the name of *furnessana* which should now go into synonymy.

Information is desired as to the location of the types of any of the following Kieffer species of Cynipidae: *Callirhytis marianii* (*meunieri*); *Holocynips nigra* (1916 from Philippines, not 1910); *Lambertonia abnormis*; *Liebelia cavarae*; *Lytoxysta brevipalpis*; *Parandricus mairei*; *Poncyia ferruginea*; *Salpictes rufiventris*, *Tavaresia carinatus*; and *Tylosema nigerrimus*.

THE OCCURRENCE OF THE CRICKETS *ANAXIPHA PULICARIA* BURM. AND *CYCLOPTILUM TRIGONIPALPUM* (RHEN AND HEBARD) IN THE VICINITY OF THE DISTRICT OF COLUMBIA, HITHERTO UNREPORTED HERE.

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Anaxipha pulicaria Burm.

For a number of years I have made field observations on a tiny cricket occurring in the deep ground debris of cold, wet swampy bogs around Clarendon and Barcroft, Virginia. This tiny cricket appears very early in May and usually becomes silent before July 1. Its stridulation is a continuous weak nemobious-like trill. The crickets are very difficult to capture and the small amount of material examined by Mr. A. N. Caudell of the U. S. National Museum and myself was tentatively pronounced a physiological form of *Anaxipha exigua*. A discussion of this cricket was made in my paper, "Physiological Differentiation in Overwintering Individuals of Certain Musical Orthoptera," *The Canadian Entomologist*, LXI, September, 1929, 195-198.

In 1929 further observations were made in a bog near Barcroft, Virginia, and additional material obtained. On the suggestion of Mr. B. B. Fulton that our material was perhaps identical with a cricket he had been studying in central North Carolina in similar habitats, and known as *Anaxipha pulicaria* Burmeister, careful comparisons of this additional material were made by Mr. Caudell with *Anaxipha exigua*.

This examination has led to a separation from *Anaxipha exigua* material on the basis of several characters. In both sexes all *exigua* material shows a more or less well-marked dark